IVANOV, P.A.

Rupture of echinococcus liver cyst into gallbladder. Khirurgiia 33
no.2:116-117 F '57.
(MLRA 10:6)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. I.L.
Bregadze) Novosibirskogo gosudarstvennogo meditsinskogo instituta
(dir. G.D.Zalesskiy).
        (LIVER DISEASES, case reports
            echinococcosis, rupt. into gallbladder (Rus))
        (ECHINOCOCCOSIS, case reports
            liver, rupt. into gallbladder (Rus))

T

COUNTRY   : USSR
CATEGORY   : Human and Animal Physiology, Circulation

ABS. JOUR.   : RZhBiol., No. 5 1959, No. 22115

AUTHOR   : Ivanov, P.A.
INST.   : The Novosibirsk Medical Institute
TITLE   : The Effect of Negative Emotions on the Oscillogram

ORIG. PUB.   : Sb. nauchn. tr. vrachey khirurg. otd., Novosib.obl.
                 klinich. bol'nitsy i sotrudn. kafedry gospit.
ABSTRACT   : khirurgii Novosib. med. in-ta, Novosibirsk,1958,
                 29--23
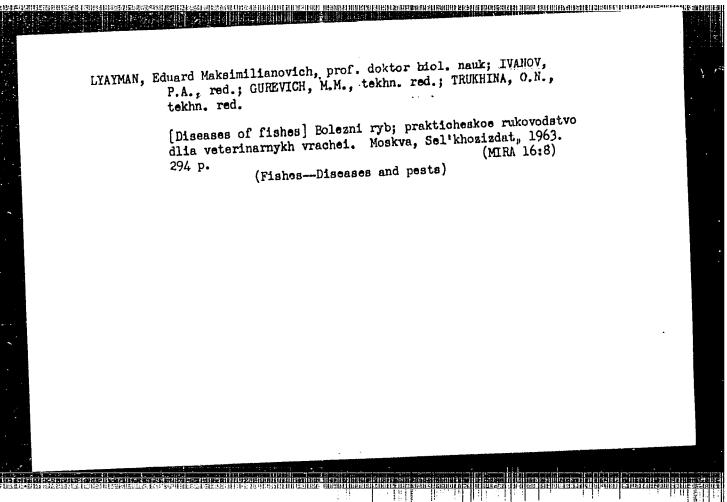   no abstract

Card: 1/1

BREGADZE, I. L., prof.; IVANOV, P. A.

Transplantation of fistulae in alveolar echinococcosis of the liver into the gastrointestinal tract. Khirurgiia 37 no.7:70-74 Jl '61.
(MIRA 15:4)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. I. L. Bregadze) Novosibirskogo meditsinskogo instituta.

(LIVER—HYDATIDS)   (FISTULA)

LYAYMAN, Eduard Maksimilianovich, prof. doktor biol. nauk; IVANOV, P.A., red.; GUREVICH, M.M., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Diseases of fishes] Bolezni ryb; prakticheskoe rukovodstvo dlia veterinarnykh vrachei. Moskva, Sel'khozizdat, 1963. 294 p. (MIRA 16:8)

(Fishes--Diseases and pests)

DEVITSYN, Ye.D., inzh.; IVANOV, P.A., inzh.; KRUTOGOLOV, V.D., inzh.;
EYGINGORIN, M.Ya., inzh.

Equipment for automatic reception of the fundamental information on
production. Mekh.i avtom.proizv. 17 no.9:42-44 S '63.
(MIRA 16:10)

IVANOV, P.A.; AKULININ, A.1.; SHVED, G.M.

Reinforcing the well-bottom zone with "M" binder; carbamide resin.
Nefteprom. delo no.12:22-25 '63.   (MIRA 17:4)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchno-issledo-
vatel'skogo instituta.

IVANOV, I H

ARONOV, Samuil Grigor'yevich; BAUTIN, Ivan Grigor'yevich; VOLKOVA, Zoya Andreyevna; VOLOSHIN, Arkhip Il'ich; VIROZUB, Yevgeniy Vladimirovich; GABAY, Lev Izrailevich, DIDENKO, Viktor Yefimovich; ZASHKVARA, Vasiliy Grigor'yevich; IVANOV, Pavel Aleksandrovich, KUSTOV, Boris Iosifovich [deceased]; KOTOV, Ivan Konstantinovich; KOTKIN, Aleksandr Matveyevich; KOMANOVSKIY, Maksim Semenovich; LEYTES, Viktor Abramovich, MOROZ, Mikhail Yakovlevich; NIKOLAYEV, Dmitriy Dnitriyevich. OBUKHOV-SKIY Yakov Mironovich; RODSHTEYN, Pavel Moiseyevich; SAPOZHNIKOV, Yakov Yudovich, SENICHENKO, Sergey Yefimovich; TOPORKOV, Vasiliy Yakovlevich; CHERMNYKH Mikhail Sergeyevich; CHERKASSKAYA, Esfir' Ionovna, SHVARTS, Semen Aronovich; SHERMAN, Mikhail Yakovlevich; SHVARTS, Grigoriy Aleksandrovich; LIBERMAN, S.S., redaktor izdatel'-stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Producing blast furnace coke of uniform quality; a collection of articles for the disemmination of advanced practices] Poluchenie domennogo koksa postoiannogo kachestva; sbornik statei po obmenu peredovym opytom. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 300 p.   (MIRA 9:8)
          (Coke industry)

SOV/68-58-10-5/25

AUTHORS: Zashkvara, V.G., Ivanov, P.A. and Sherbinin, A.M.

TITLE: Mechanisation of Screening Coal Samples (Mekhanizatsiya rasseva prob uglya)

PERIODICAL: Koks i Khimiya, 1958, Nr 10, pp 17 - 18 (USSR)

ABSTRACT: A small screening plant for size analysis of coal samples of the order of 2 tons, designed by UKhIN is described and illustrated. It consists of 4 screens and 5 receiving bunkers, so that the division of a coal sample into 5-size fractions is possible. The throughput is 1 000 kg/h. The plant was tested on the Zaporozhye Coking Works with coals of up to 8% moisture content. The efficiency of the smallest screen, 3 x 3 mm, was found to be 97.2%. At present, a plant capable of separating coal into 8-size fractions is being designed by UKhIN. There is 1 figure.
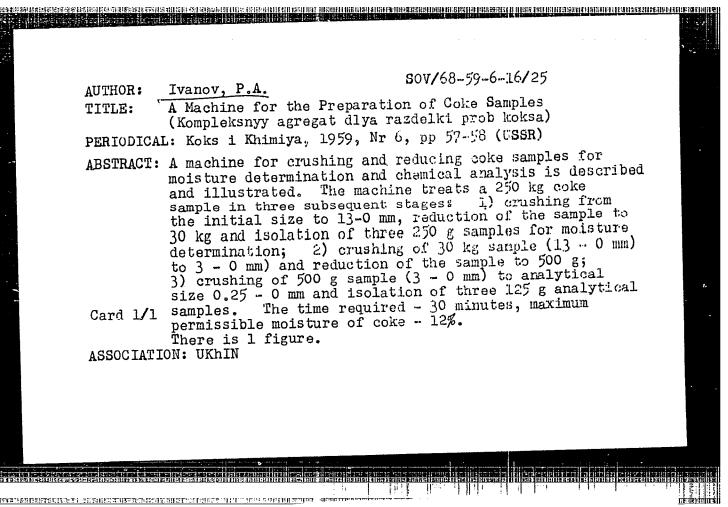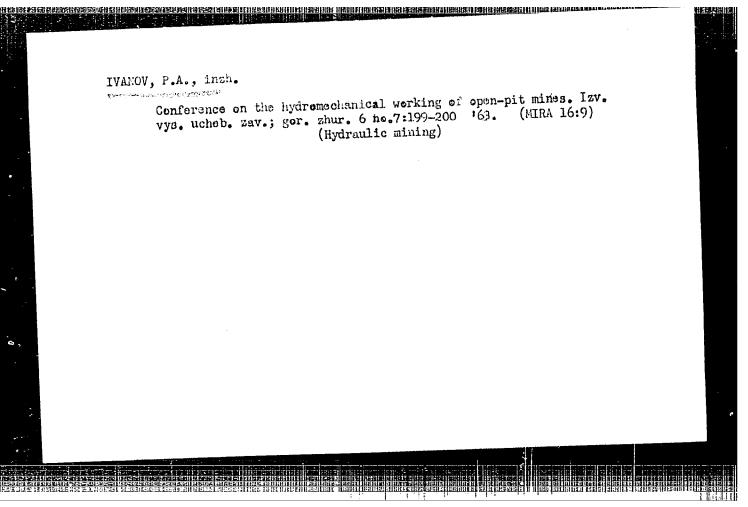
ASSOCIATION: UKhIN

Card 1/1

IVANOV, P.A., inzh.

Economic efficiency of underground coal mining by hydraulic methods. Izv.vys.ucheb.zav.; gor.zhur. no.4:14-19 '59.
(MIRA 13:5)

1. Sverdlovskiy gornyy institut imeni V.V. Vakhrusheva.
Rekomendovana kafedroy ekonomiki.
(Coal mines and mining--Costs)
(Hydraulic mining--Costs)

SOV/68-59-6-16/25

AUTHOR: Ivanov, P.A.
TITLE: A Machine for the Preparation of Coke Samples
           (Kompleksnyy agregat dlya razdelki prob koksa)
PERIODICAL: Koks i Khimiya, 1959, Nr 6, pp 57-58 (USSR)

ABSTRACT: A machine for crushing and reducing coke samples for
           moisture determination and chemical analysis is described
           and illustrated. The machine treats a 250 kg coke
           sample in three subsequent stages: 1) crushing from
           the initial size to 13-0 mm, reduction of the sample to
           30 kg and isolation of three 250 g samples for moisture
           determination; 2) crushing of 30 kg sample (13 - 0 mm)
           to 3 - 0 mm) and reduction of the sample to 500 g;
           3) crushing of 500 g sample (3 - 0 mm) to analytical
           size 0.25 - 0 mm and isolation of three 125 g analytical
Card 1/1   samples. The time required - 30 minutes, maximum
           permissible moisture of coke - 12%.
           There is 1 figure.
ASSOCIATION: UKhIN

IVANOV, P.A., inzh.

Conference on the hydromechanical working of open-pit mines. Izv.
vys. uchob. zav.; gor. zhur. 6 no.7:199-200 '63.   (MIRA 16:9)
                    (Hydraulic mining)

IVANOV, P.A., inzh.

Coefficient of static friction and coal and rock movement;
using the Kizel Basin as an example. Izv. vys. ucheb. zav.;
gor. zhur. 7 no.3:126-128 '64   (MIRA 17:8)

1. Sverdlovskiy gornyy institut imeni Vakhrusheva. Rekomendovana
Kafedroy razrabotki rudnykh mestorozhdeniy.

IVANOV, P.A., inzh.

Laboratory investigation of the basic parameters of pressure-
less hydraulic transportation of coal, rock, and their mixtures.
Izv. vys. ucheb. zav.; gor. zhur. no.8:17-20 '64   (MIRA 18:1)

1. Sverdlovskiy gornyy institut imeni V.V. Vakhrusheva. Rekomen-
dovana kafedroy razrabotki rudnykh mestorozhdeniy.

IVANOV, P.A.; inzh.

Investigating several parameters of the hydraulic transportation
of classified coal in an open flow. Izv.vys.ucheb.zav.; gor.zhur.
7 no.12:86-90 '64.
(MIRA 18:2)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana
kafedroy razrabotki rudnykh mestorozhdeniy.

1. IVANOV, P. A.

2. USSR (600)

4. Cattle Diseases

7. Discovery of Sarcosporidia in the heart muscle of cattle. Nauch. trudy UIEV 18, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

IVANOV, P.A.

NIKITIN, Vladimir Nikolayevich, professor; IVANOV, P.A., redaktor;
BYRDINA, A.S. redaktor; BALLOD, A.I., tekhnicheskiy redaktor.

[Hematological atlas of farm and experimental animals. Color
tables] Gematologicheskii atlas sel'skokhoziaistvennykh i la-
boratornykh zhivotnykh. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1956, 259 p. TSvetnye tablitsy.1956.[3]p. and 191 plates in:
(portfolio)   (MIRA 10:6)
            (Fluids and humors, Animal)

RUMYANTSEV, Nikolay Viktorovich, doktor veterinarnykh nauk; IVANOV, P.A.,
    red.; YARNYKH, A.M., red.; SOKOLOVA, N.N., tekhn.red.; GUREVICH,
    M.M., tekhn.red.

    [Contagious venereal diseases in cattle] Zaraznye polovye bolezni
    krupnogo rogatogo skota. Moskva, Gos. izd-vo sel'khoz. lit-ry,
    1958. 333 p.   (MIRA 12:1)
            (Cattle--Diseases and pests)   (Venereal diseases)

SAKHAROV, Nikolay Alekseyevich; BALAKINA, V.M., red.; IVANOV, P.A., spets. red.; LEVINA, L.B., tekhn. red.

[Technique of training service dogs] Tekhnika dressirovki sluzhebnykh sobak. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1961. 141 p. (MIRA 15:2)

(Dogs—Training)

1. IVANOV, P. ENG.

2. USSR (600)

4. Woodworking Establishments

7. Lumber yard for millwork. Sel' stroi. 3 no. 3. 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

IVANOV, P..A.

IVANOV, P.A.

Deep staining of beech veneer. Der. i lesokhim.prom 3 no.6:23-25
Je '54.   (MLRA 7:7)

1. Glavnyy inzhener Chinadiyevskogo derevoobrabatyvayushchego kombinata.
   (Stains and staining) (Beech) (Veneers and veneering)

IVANOV, P.A.

Guiding sector ruler for longitudinal layout of boards. Der. i
lesokhim.prom. 3 no.10:21 O '54.   (MLRA 7:11)

1. Glavnyy inzhener Chinadiyevskogo derevoobrabatyvayushchego
kombinata.
        (Carpentry--Tools)

IVANOV, P.A., inzhoner.

Installation for lacquering furniture panels. Der.prom.5 no.7:21
Jl '56.   (MIRA 9:9)

1.Chinadiyevskiy derevoobrabatyvayushchiy kombinat.
                    (Lacquer and lacquering)

IVANOV, P.A.

The Photo-Colorimeters "FOKO", "FOK-43M", and "FOK-48S". P. A. Ivanov and P. E. Sukhareva (Zavod. Lab., 1946, 12, 114-117; C. Abs., 1948, 40, 6896).—[In Russian]. The 3 photo-colorimeters described contain selenium and sulphur-silver photo-elements. The selenium photo-elements, whose max. spectral sensitivity is within the region 400-600 mµ, are suitable for determinations of the concentrations of solutions of various colours. The sulphur-silver photo-elements can be used for determinations of concentrations of blue solutions. The sensitivity of sulphur-silver photo-elements is considerably greater than that of selenium photo-elements (3000 and 500 micro-amp./lumen, respectively).

METALLURGICAL LITERATURE CLASSIFICATION

IVANOV, P.A.

C A

Rotation viscometer VIR-45. P. A. Ivanov and G. V. Aronovich (Gorkii Phys. Tech. Inst.). Zavodskaya Lab. 13, 237-8(1947).—The rotating cylinder immersed in the liquid is driven by an elec. motor mounted in a Wheatstone bridge with potentiometer. The decrease of the elec. resistance of the motor, depending on the viscosity of the liquid, is compensated by adjustment of the potentiometer to zero deflection of the galvanometer, and the viscosity is read in terms of divisions of the potentiometer scale with the aid of a calibration curve. The app. permits detns. of viscosities from 0.01 to 40 poise. N. Thon

Ivanov, P.A.

16

*284. New GIFTI Photo-Colorimeter. (In Russian.) P. A.
Ivanov and Z. E. Sukhareva. *Factory Laboratory*
(U.S.S.R.), v. 13, Aug. 1947, p. 964-969.
Describes a new instrument developed by the
Gorki Physical-Technical Research Institute. In-
cludes details of circuits and of the selenium
photocell used.

METALLURGICAL LITERATURE CLASSIFICATION

IVANOV, P.A .

Photonephelometers of gifti type. P.A. IVANOV and
Z. E. SUKHAREVA. Zavodskaya lab. 15, 866-7 (1949) FOLF-46 and FON-47
Description with diagrams of photonephelometers
of SOVIET manuf. G.M.K.

IVANOV, P.A.

Measuring viscosity. Zav. lab. 23 no.4:457-460 '57.   (MLRA 10:6)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut.
(Viscosity--Measurement)

IVANOV, P.A.; KRUTOGOLOV, V.D.

Viscosimeters for continuous measurements. Izv. vys. ucheb.zav.;
prib. no.2:69-72 '58.   (MIRA 11:7)

1.Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut.
                    (Viscosimeter)

119-58-4-7/15

AUTHORS: Borisevich, L.N., Ivanov, P.A.

TITLE: The Electric Viscosimeter EVI -53 (Elektroviskozimetr EVI -53)

PERIODICAL: Priborostroyeniye, 1958, Nr 4, pp. 17-18 (USSR)

ABSTRACT: The work performed by means of this apparatus consists in trans-
              forming the amount of viscosity into the phase shift of an
              auxiliary voltage which is proportional to it and to measure this
              shift.
              In principle the wiring diagram is as follows: The coilings of a
              micromotor are switched on to the feed lines of the system. The
              coilings of the microgenerator are connected by means of a com-
              pensation bridge with a subtracting potentiometer. A phase indi-
              cator is built into the diagonal of the bridge; its rectified
              voltage with respect to amount and sign depends upon the phase
              shift between the voltages U_d - grid voltage at the rectifier
              triodes - and U_1, U_2 - anode voltages.
              This device offers the following advantages:

Card 1/2

21(10)
AUTHORS:

Ivanov, P. A., Krutogolov, V. D.,
Engineers

TITLE:
Viscosity Measurement in a Hermetically Sealed Device
(Izmereniye vyazkosti v germetizirovannom reaktore)

ABSTRACT:
This method can be used in cases where the viscosity of
volatile or poisonous substances must be measured. It is due
to the Gor'kovskiy nauchno-issledovatel'skiy fiziko-
tekhnicheskiy institut(Gor'kiy Scientific Research Institute
of Physics and Engineering). An electrical viscosimeter
EVI-55-R is used as a measuring instrument. The indication
error is given to be 2.5 % at low readings and 1 % at normal
viscosities. If a EPP-09 or a EPD potentiometer is used, the
results can be plotted directly on a graph. The principle of
this method is based upon the fact that the angle between the
voltage applied to the stator winding of a single-phase
synchronous midget motor and the counter-emf generated in
this winding is measured. The device consists of two parts,
the measuring parts, and an extensible part to which the

Card 1/2

Viscosity Measurement in a Hermetically Sealed Device   SOV/119-58-12-13/13

transducer and the midget motor is mounted. The individual
parts are portrayed in photographs. A special coating
protects the most important parts of the device against
corrosion. The device was subjected to exhaustive testing
which revealed that it furnishes well reproducible results.
There are 2 figures.

Card 2/2   USCOMM-DC-60,969

IVANOV, P.A.

Electric viscosimeter using mixer as operating part. Khim. nauka i prom. 3 no.1:132-133 '58. (MIRA 11:3)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut.
(Viscosimeter)

э(ε)   SOV/115-59-3-25/29
AUTHOR: Ivanov, P.A.

TITLE: A Portable Electric Viscosimeter (Perenosnyy elektro-
               viskozimetr)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 3, pp 54-57 (USSR)

ABSTRACT: The portable electric viscosimeter EVI-56P was deve
               loped for high-speed viscosity measurements at the
               production site. Viscosities of insulating varnishes,
               enamels and similar liquids may be measured. The
               device may find a wide-spread application in metal-
               lurgy, in the chemical, cable, radio and electrotech-
               nical, petroleum and textile industry. The device
               performs viscosity measurements with great precision
               in the range of 0 to 100 poise at temperatures of
               +15 to +300°C. The principle of functioning of this
               device is based on converting the viscosity value
               into a proportional phase shift of some auxiliary
               voltage. The basic elements of the device are a
               control panel and a synchronous transducer. The
Card 1/2   interchangeable nozzles are fastened to the shaft of

A Portable Electric Viscosimeter   SOV/115-59-3-25/29

the latter. The number of nozzles which are dif-
ferent in their geometric dimensions is equal to
the number of measuring ranges. For the EVI-56P
there are five nozzles with the following ranges
(in centipoise) 0-50, 0-250, 0-500, 0-1000, 0-10000.
In the new model EVI-57P, the first and the second
range are combined to one range with a nominal value
of 200 centipoise, while the third and fourth are
combined to one range with the nominal value of 1000
centipoise. Figure 2 shows the circuit diagram of
the device. The author explains the functioning
of the microgenerator and micromotor by figure 3.
He also presents formulae for the phase shift pro-
cesses. There are 3 graphs, 1 circuit diagram and
2 tables.

Card 2/2

S/119/61/000/001/011/013
B019/B067

AUTHORS: Ivanov, P. A., Engineer, and Krutogolov, V. D., Engineer

TITLE: Laboratory Electroviscosimeter of the Type ЭВИ-58Л (EVI-58L)

TEXT: The viscosimeter described was developed at the Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut (Gor'kiy Research Institute of Physics and Technology). It allows periodic and continuous measurements of viscosity under laboratory conditions. The temperature of the liquid is kept constant by a thermostat. The operation of the instrument is based on the measurement of a phase shift of an auxiliary voltage which is proportional to the viscosity of the liquid. It has five measuring ranges (0-100, 0-200, 0-2000, 0-20 000, and 0-200 000 centi poise), the change from one measuring range to the other takes place by changing the nozzle. The measuring error is below 1%. The instrument consists of a control panel a pick-up with a thermostat, and a grid instrument. The control panel contains the measuring part of the instrument and the control

Card 1/2

IVANOV, P.A.; KRUTOGOLOV, V.D.

The EVI-57PL universal electric viscosimeter. Priborostroenie no.7:26-
27 Jl '62.   (MIRA 15:7)
                          (Viscosimeter)

S/119/63/000/002/011/014
A004/A127

AUTHORS: Devitsyn, Ye.D., Ivanov, P.A., Krutogolov, V.D.

TITLE: Automatic ЭВИ-60 AT (EVI-60AT) electric viscometer for viscosity measurements in the flow

PERIODICAL: Priborostroyeniye, no. 2, 1963, 27

TEXT: The EVI-60AT electric viscometer, developed at the Issledovatel'-skiy fiziko-tekhnicheskiy institut (Physico-Technical Research Institute) of the Gor'kiy State University im. N.I. Gorbachevskiy is based on the principle of converting the viscosity magnitude into electric voltage. The phase of this voltage varies in proportion to the viscosity measured. The mentioned voltage is fed to the arm of a semi-balanced bridge whose output voltage is fed to a phasesensitive detector and further, for recording, to the input of an automatic potentiometer. An automatic zero correction is provided for in fixed time intervals. The device is intended for viscosity measurements in the range of 0 - 1, 0 - 10, 0 - 20 poise at temperatures in the working chamber of up to 100°C. The relative error of the viscometer does not exceed 2%

Card 1/2

S/119/63/000/002/011/014

Automatic ЭВИ-60 AT(EVI-60AT) electric ...   A004/A127

over all the measurement ranges. The author gives a detailed description
of the viscometer units, design characteristics and functioning and present
the EVI-60AT viscometer block diagram. There are 2 figures.

Card 2/2

IVANOV, P.A.

       Bridge circuit of a rotary viscosimeter with a synchronous
pickup. Izm.tekh. no.3:59-61 Mr '63.   (MIRA 16:4)
           (Bridge circuits)   (Viscosimeter)

LEYBZON, Z.I., kand. tekhn. nauk; IVANOV, P.A.

Effect of temperature and air moisture on the effective indices of the IAMZ-236 diesel engine. Avt. prom. 29 no.7: 4-7 Jl '63.

(MIRA 16:8)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

(Diesel engines—Testing)

L 22052-66   EWT(m)/EWP(k)/EWP(t)   IJP(c)   JD/HM

ACC NR: AP6009170   SOURCE CODE: UR/0182/65/000/011/0044/0046

AUTHOR: Ivanov, P. A.

ORG: none

TITLE: Advantages of flashless drop forging

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 11, 1965, 44-46

TOPIC TAGS: flashless die forging, die, drop forging, die forging, cost estimate

ABSTRACT: On the basis of industrial experience up to date it is shown that flashless
forging, while it is doubtless a progressive technique, requires a thorough techni-
cal and economic analysis of all the positive and negative factors in every indivi-
dual case since its advantages (savings of metal, lower labor requirement of forging)
may be offset by its disadvantages (cost of die assembly owing to the rapid wear on
dies and drop hammers, as well as the higher labor requirement of machining to com-
pensate for the dimensional variations in the volume of the blank (due to variations
in rolling tolerances) and in the cavity of the die (due to the wear and current re-
pair of dies) which cause the forgings thus obtained to actually display a flash or
"collar" which can be removed only with great difficulty by means of machine tools.
It is because of these disadvantages that certain plants prefer not to employ the
flashless forging method. Some plants employ a technique for trimming the flash di-

Card 1/2   UDC: 621.73.034

L 22052-56

ACC NR: AP6009170

rectly in the die. Thus, the criterion of the effectiveness of flashless die forging
must be a thorough comparative calculation of the production cost per output unit,
inclusive of subsequent processing and machining of the forgings. A comparative study
of production cost at five Soviet plants (Chelyabinsk Tractor Plant, Lugansk Coal
Machine Building Plant, Kaliningrad Rolling Stock Plant, Kalinin Rolling Stock Plant)
indicates that flashless die forging does not produce the desired effect, even if it
saves as much as 10% of metal, if the wear resistance of the die sets used for this
purpose is markedly (30-50%) lower than the wear resistance of the die sets used in
conventional forging. Orig. art. has: 5 figures, 3 tables, 9 formulas.

SUB CODE: 13/   SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card   2/2)ng.s

IVANOV, P.A.; KRUTOGOLOV, V.D.

Rotary viscosimeter with a phase-amplitude converter. Izm. tekh.
no.6:70-71 Je '65.
(MIRA 18:8)

| 1200 | S/182/60/000/010/001/006
A161/A029 |

AUTHOR: Ivanov, P.A.

TITLE: Friction Coefficient in Pressing Determined by Using the Slip Lines
               Theory

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 10, pp. 4 - 6

TEXT: In all experimental investigations up to now the friction coefficient
was determined indirectly and in conditions far from the real metal pressing pro-
cess (Refs. 2 - 4). A new method is described, developed at the pressing labora-
tory of the Institut mashinovedeniya AN SSSR (Institute of the Science of Machines
of the AS USSR) and based on a work by A.D. Tomlenov (Ref. 5). It consists in the
determination of a plastic equilibrium zone in metal under the rounded end of a
punch being forced into it. The zone is determined in two dimensions only. The
slip lines network plotted for the first time for this purpose by Prandtl is
shown (Fig. 1), where the f-m-e area is the zone of plastic equilibrium, i.e., of
metal moving down without plastic deformation. The area is limited by the angle
φ_0 (90°), and is not to be confused with the adhesion zone that can be spread
over the entire contact surface in an infinitely thin boundary layer. The f-m-e

Card 1/4

86720
S/182/60/000/010/001/006
A161/A029

Friction Coefficient in Pressing Determined by Using the Slip Lines Theory

area is proportional to the friction coefficient, and the φ_0 angle is determined by the relation $\varphi_0 = \frac{\pi}{2} - 2\alpha$, where α is the angle of incline of the straight slip lines to the tangent to the punch and outline at the point m or f. The angle α is determined by the friction coefficient (Ref. 5): $\alpha = \frac{1}{2}$ arc cos 2μ and it follows that it is sufficient to know the f-m-e zone boundaries, i.e., the φ_0 angle, to find the friction coefficient. It is obtained by simple transformation of formulas (2) and (3): $\mu = \frac{1}{2}$ cos $(\frac{\pi}{2} - \varphi_0) = \frac{1}{2}$ sin φ_0. Friction coefficient values for a series of φ_0 angle are given in a table. The slip lines are directly visible in certain experimental conditions, as can be seen in a photograph (Fig. 2) of an aluminum specimen pressed with machine oil for lubrication, and the φ_0 is measured. (In this case μ was found to be 0.17). But it is rarely possible to obtain a clear slip lines pattern, and in order to make the method more universal several other methods of finding the zone of plastic equilibrium have been suggested. Two of them are described. The 1st consists in tracing evenly spaced straight lines along the contact arc in the split plane of the specimen (Fig. 3) and measuring the deformation by the change of the pitch (t) under the microscope. There will be no pitch change seen in the zone defined by

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S/182/60/000/010/001/006
A161/A029

Friction Coefficient in Pressing Determined by Using the Slip Lines Theory

the ϕ_0 angle. This method has been used for deformation of annealed aluminum without lubricant, with machine oil and with vaseline, and the friction coefficient values were found to be 0.43, 0.20 and 0.12, respectively. The 2nd methods consists in tracing a network of straight evenly spaced generatrices (concentrical circles) on the surface of preliminarily formed punch indentation (that is spherical). It is not necessary to manufacture a split specimen, but it is more difficult to trace a network with even pitch and to measure the deformation by its distortion. The first method is therefore more reliable and more simple. Other methods that can be suggested to facilitate the observations of the slip lines network are: nitro-cementation of steel specimens, anodization of aluminum alloys or a film of brittle varnish or scale for any metal. There are 3 figures and 5 Soviet references.

α_0°	90	80	70	60	54	50	44	40	38
μ	0,5	0,492	0,465	0,433	0,404	0,383	0,347	0,321	0,308
φ_0°	34	30	24	20	14	12	10	4	0
μ	0,280	0,250	0,203	0,171	0,121	0,104	0,086	0,035	0

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20203

I 1200   also 1496, 1413

S/182/60/000/011/005/016
A161/A029

AUTHOR: Ivanov, P.A.

TITLE: Hot Extrusion of Parts From Carburized Blanks

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 11, pp.18-21

TEXT: The article gives information on preliminary results of ex-
periments with a combined thermo-chemical and hot-deformation process at
the Laboratory of Pressure Working of the Institut mashinovedeniya AN
SSSR (Institute of Machine Science, Academy of Sciences USSR). The parts
extruded in the experiments are piston pins. Rod metal was cut into
blanks, carburized at 1,100-1,200°C, extruded hot in a closed die, then
hardened, annealed and finished. A high cementation temperature has proved
feasible, for the metal structure is refined in subsequent pressure work-
ing and the degree of this refinement is controllable. [Abstracter's
note: the die is not described]. A hydraulic 100-ton press was used. The
blanks were of "15" steel, 28 mm in diameter and 55 mm long. They were
carburized at 1,100-1,200°C for 1 hour and the carburized layer was 1.5 -
2 mm deep; carburized blanks were taken to the press straight from the

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Hot Extrusion of Parts From Carburized Blanks S/182/60/000/011/005/016
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furnace, i.e., without reheat. The extruded pins had two symmetrical
hollows and a 4-5 mm thick separating wall (Fig. 2), an outer diameter of
28.6 mm and a length of 90 mm. No ruptures in the carburized layer were
revealed under the microscope; the depth of the carburized layer depended
on the carburized depth before extrusion and on the friction in contact
with the die. The flow lines network, formed during extrusion by a punch
with a flat end (Fig. 1), was plotted as for two-dimensional deforma-
tion in meridional cross sections, but this did not lead to errors exceed-
ing the possible inaccuracies of the initial data (yield limit, friction
coefficient, etc.). The flow lines are drawn for the maximum friction
coefficient limited by the condition of plastic flow ($\mu = 0.5$); for other
values than 0.5 the lines reaching the contact surfaces will be turned
for the friction angle $0 < \nu < \dfrac{\pi}{4}$. The hollow is slightly tapered,
as the punch has a $0°30'$ taper on one side. The plastic equilibrium area
at the flat punch end (ℓ in Fig. 1) is determined by the value (Ref. 4)

$$\ell = t \left(1 + \frac{\pi}{2} \right) , \qquad (1)$$

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Hot Extrusion of Parts From Carburized Blanks   S/182/60/000/011/005/016
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where t is the separating wall thickness. In the case of a punch with
spherical end the plastic equilibrium area will be determined by the
central angle

$$\epsilon = \frac{\pi}{2} - 2$$ (2)

that is correlated with the friction coefficient (Ref. 5):

$$\mu = \frac{1}{2} \sin \gamma$$ (3)

where ' is the incline angle of straight flow lines to the tangent to the
spherical punch surface at a corresponding point. The plastic deformation
area moves together with the punch and the carburized layer in the zone
limited by the ab line remains practically equal to the carburized depth
on the blank. This means that the separating wall can be carburized
through. If this is not desired, an effective lubricant must be used. The
carburization depth in the walls and the bottom of the cavities can also be
reduced by putting the blanks face to face in the carburizing furnace. On
the outside of the piston pins the carburized layer can be very different
and its depth depends on the contact friction value. Hence the carburized

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Hot Extrusion of Parts From Carburized Blanks   S/182/60/000/011/005/016
                                                  A161/A029

depth can be controlled on the inside and on the outside by varying the
carburized depth on the blanks and the contact friction. The required
extrusion effort for a tapered punch (with an apex angle of up to 2-3°)
is calculated by the formula

$$Q_\mu = \sigma_T \left[1 + 2\gamma - 5\mu \left(0.93 + \frac{h}{d} + \frac{0.5h}{D-d} \right) \right] f \quad (6)$$

(see Fig. 1), where σ is the yield limit. The additional effort from the
plastic compression of the separating wall is calculated by a formula
from Ref. 5. It is mentioned that in practical shop work the extrusion of
both hollows in pins can be produced in two presses standing close, or in
one press with a two-position die. Mechanical high-speed presses with
opposite slides would be most convenient. Using such a press, a short and
simple automatic line carburizing, pressing and hardening the parts would
be feasible. There are 3 figures and 5 references: 4 Soviet, 1 English.

Card 4/6

20394

S/182/61/000/005/002/006
D038/D112

I.1200   aGo 1045.
            1454

AUTHOR: Ivanov, P.A.

TITLE: Determination of the friction coefficient by the hardness distribution in the plastic zone

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1961, 10

TEXT: In a previous article by the author (Ref. 1: Kuzn.-shtampv. proizv., no. 10, 1960) it was demonstrated that the coefficient of contact friction, when a die is introduced into a plastic medium, can be determined from the correlation:

$$\mu = \frac{1}{2}\, sin\,\varphi_0 \, ,\qquad (1)$$

where φ_0 is the central angle which determines the dimension of the plastic equilibrium area (Fig. 1). When the die is pressed in, the area of plastic equilibrium moves like a hard wedge ahead of the punch. The metal suffers the greatest shear stress and hardens most within a narrow strip along the boundaries ob and oc. As the degree of metal hardness grows, the maximum hardness is located at one point (o) along the die symmetry axis. The o spot determines the depth (h) of the plastic equilibrium area. Knowing

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S/182/61/000/005/002/006
Determination of the friction coefficient...   D038/D112

the dimension h and the punch radius (R) and taking into consideration that
the ob and oc slip lines intersect with the vertical axis at a 45° angle, it
is possible to determine the central angle:

$$h = \frac{a}{2} - X = R \sin\frac{\varphi_0}{2} - R\left(1 - \cos\frac{\varphi_0}{2}\right) = R\left(\sin\frac{\varphi_0}{2} + \cos\frac{\varphi_0}{2} - 1\right),$$

(2)

where a is the length of the chord (bc) and x is the segment arrow with the
central angle φ_0. Having solved the equation 2 in reference to $\sin\varphi_0$, the
author obtains:

$$\sin\varphi_0 = \frac{h^2}{R^2} + \frac{2h}{R}.$$

(3)

By substituting $\sin\varphi_0$ into formula (1) from formula (3), the author obtains:

$$\mu = \frac{1}{2}\sin\varphi_0 = \frac{h}{R}\left(\frac{h}{2R} + 1\right).$$

(4)

The value h is determined in a hardness test of a specimen in the cross
section along the symmetry axis of the impression. The hardness of speci-
mens made from hardening materials pressed with a hardened steel punch is
not uniform; it increases sharply away from the contact surface (k) to the
point o and then decreases and approaches the hardness of non-deformed
Card 2/4

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Determination of the friction coefficient...   D038/D112

material. A graph (Fig. 2) illustrates the hardness change in the cross
section of a 20Х (20Kh) steel specimen when a 17.5 mm diameter steel ball with
a greased polished surface (curve 1) and a die with the same diameter with
an ungreased rough coarse surface (curve 2) are pressed in. The maximum
hardness value of curves 1 and 2 corresponds to the spot o in figure 1, and
the dimensions h_1 and h_2 show the depth of plastic equilibrium. By substi-
tuting values h_1 and h_2 into the formula (4) the following expressions will
be obtained (respectively): $\mu_1 = 0.08$, $\mu_2 = 0.44$. The angle ψ_0 cannot exceed
90°, therefore the maximum depth of the plastic area, according to formula
(4) will be:

$$h_{max.} = R\left(\sqrt{2} - 1\right) \approx 0.41 R.\qquad\qquad (5)$$

The maximum value of the contact friction coefficient ($\mu = 0.5$), limited by
plasticity corresponds to this case. There are 2 figures and 3 Soviet re-
ferences. [Abstracter's note: Essentially complete translation.]

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24551

S/182/61/000/008/002/005
D038/D113

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AUTHORS: Ivanov, P.A.; Chirikov, V.T.

TITLE: Hot extrusion of carburized steel parts

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 8, 1961, 5-8

TEXT: The present work is a supplementary research to an earlier investiga-
tion by one of the authors (Ref. 6: P.A. Ivanov, Kuznechno-shtampovochnoye
proizvodstvo, no. 11, 1960) on a new technological process in which carbur-
izing and hot plastic deformation are combined. It is stated that the grain
growth, during high-temperature carburizing, becomes considerably finer and
better in texture during subsequent pressure working. The depth of carbur-
izing is expressed thus: $h = 285 \exp \left(-\frac{1280}{T} \right)\sqrt{\tau}$, (1), where h is the
depth of the carburized layer in mm, T is the absolute carburizing tempera-
ture, and τ is the soaking time per hour. According to the formula (1) a
2.3 hr soaking time at 1100°C instead of a 16 hr one at 930°C was sufficient
for carburizing in a 2 mm deep layer. A lubricant on a benzene and propylene
polymer base mixed with graphite is advocated. It is claimed that the new

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S/182/61/000/008/002/005
D038/D113

Hot extrusion of carburized steel parts

process would eliminate lengthy production processes, and could be used for the continuous mass production of various carburized steel parts such as ball bearing rings, certain automobile parts, etc. There are 4 figures, 1 table, and 7 references: 5 Soviet and 2 English references. The two references to English language publications read as follows: P.M. Unterweiser, "What controls are needed for accelerated carburizing?", Iron Age, No. 3, Vol. 183, 1959; H.N. Ipsen, "High temperature carburizing", Metallurgia, No. 354, 1959.

Card 2/2

/8.1110

AUTHORS: Ivanov, P.A. and Chirikov, V.T.

TITLE: Testing steels for strength at high deformations

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 4, 1962, 4-6

TEXT: Annealed specimens of 15Γ (15G), $18X\Gamma T$ (18KhGT) and 3 experi-
mental steels were tested for uniaxial compression. The best approximation
to the linear compression diagram was obtained by upsetting cylindrical
specimens provided with oil-filled face grooves. The curves of true stress
were plotted during compression. The final equation for calculating the
deformation is given:

$$\sigma = \frac{P}{f_0}(1 - \varepsilon), \qquad (6)$$

where σ is the compression stress; P - the pressure; f_0 - the flowing area

Card 1/2

Testing steels for strength ...

S/182/62/000/004/003/006
D038/D113

of the cross section of the specimen, and ε - the degree of deformation. The adherence to the linear diagram of the strained state should serve as a basis for plotting the diagram of true stresses in conformity with the compression energy diagrams. It is concluded that several important characteristics can be derived by uniaxial tests on cylindrical specimens. There are 2 figures and 2 tables.

Card 2/2

BREGADZE, Iosif Lavrent'yevich; IVANOV, Petr Aleksandrovich;
    DEKHTYAR', Y. G., red.

    [External biliary fistulae] Naruzhnye zhelchnye svishchi.
    Moskva, Meditsina, 1965. 142 p.   (MIRA 18:8)

7 (4), 7 (5), 21 (9)

AUTHORS: Dzhelepov, B. S., Ivanov, P. B.,   SOV/48-23-7-1/31
                Nedovesov, V. G., Chumin, V. G.

TITLE: Magnetic α-Spectrometer (Magnitnyy α-spektrometr)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
                Vol 23, Nr 7, pp 782-787 (USSR)

ABSTRACT: In the introduction of this paper, it is pointed out that most
                α-spectrometers work with inhomogeneous magnetic fields, and
                that their resolving power is different (half-width of the
                lines 0.05 to 0.08 %) and their light intensity is low
                (aperture ratio 0.01 to 0.08 % of 4π). The purpose of the
                present paper is to develop an α-spectrometer with a resolving
                power of 0.10 % at an aperture ratio of 0.3 % of 4π. In the
                first part of the paper, the experimental arrangement
                (electromagnet with its screening and current supply,
                evacuation plant, accomodation of the radioactive sources, as
                well as the geometrical control of the α-ray) is described in
                detail, and supplemented by figure 1 (pole shoes) and figure 2
                (chamber). The second part deals with the measurement of the
                axial-symmetric magnetic field. The focusing angle is indicated
Card 1/3   with $\pi\sqrt{2}$, and three papers are mentioned showing that

Magnetic α-Spectrometer   SOV/48-23-7-1/31

spectrometers of this type have the most favorable relation
between resolution and light intensity. For the axial component,
an equation is given in which the coefficient β determines the
focusing properties of the field. The influence of the
magnitude of β on the width is discussed, and the measurement
of the topography of the magnetic field by means of a rotatable
coil is dealt with. These measurement results are shown in a
diagram (Fig 3). Another diagram shows the topography of the
magnetic field in dependence on the position of the screening
rings on the pole shoes (Fig 4). The α-particles are recorded
by thick nuclear photoemulsions. The last part deals with the
determination of the characteristic of the spectrometer. It was
carried out with a Po^{210}-source, and the half-width of the
lines amounted to 0.1 %. A variation of the solid angle did not
show any influence, and the variation of the half-width of the
line caused by a change in width and height of the source
followed theoretical formulas of a previous paper (Ref 10). A
diagram shows the dependence of the resolving power on the
aperture ratio of the spectrograph (Fig 5). B. P. Shishin took
part in the adjustment and calibration of the instrument. The

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SOV/48-23-7-1/31

Magnetic α-Spectrometer

Instrument for the measurement of the magnetic field by the method of proton
resonance, D. M. Ziv and V. V. Fedorov for the preparation of
the polonium sources, and also A. P. Zhdanov for his help in
the preparation of the photoemulsions. There are 5 figures and
10 references, 2 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR
(Radium Institute imeni V. G. Khlopin of the Academy of
Sciences, USSR)

Card 3/3

24,6210

AUTHORS: Dzhelepov, B. S., Ivanov, P. B., Nedovesov, V. G.

TITLE: Alpha-decay of Pu^{239}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,
            no. 6(12), 1961, 1725-1728

TEXT: The authors studied the α-spectrum of Pu^{239} by means of a double-
focusing magnetic α-spectrometer. Besides the wellknown α-lines, lines
corresponding to transitions to the levels 104, 198, 224, 299, and
possibly 243 kev have been detected. The measurements are given in
Table 2. A decay scheme is suggested for Pu239 (Fig. 2). The authors
thank L. L. Gol'din, G. I. Novikova, V. A. Belyakov, and V. N. Belayev for
their help. There are 2 figures, 2 tables, and 9 references: 5 Soviet
and 4 non-Soviet. The three references to English-language publications
read as follows: D. Strominger et al. Table of Isotopes, UCRL, 1928, 1958;
F, Asaro, I. Perlman. Phys. Rev., 88, 828, 1952; J. O. Newton. Nucl. Phys.,
3, 345, 1957; 5, 218, 1958.

Card 1/0 2

Alpha-decay of Pu^{239}

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

SUBMITTED: June 12, 1961

Legend to Table 2:   (1) number of the line, (2) level energy, kev, (3) transition intensity, per cent, (4) forbiddenness factor, (5) transition from Pu^{240} impurities to the 4^+ level of U^{236}, (6) impurity U^{233}.

№ 1 линии	Энергия 2 уровня, keV	Интенсив- 3 ность перехода, %	Коэффи- 4 циент запрета
α_0	1	72	1,7
α_1	13	17	8,1
α_2	51	11	5,7
α_3	84	0,038	950
α_4	104	0,030	1030
α_5	5 переход Pu^{240} на уровень 4^+ ядра U^{236}		
α_6	150	0,018	800
α_7	170	0,008	1290
α_8	198	0,008	860
α_9	224	0,008	580
α_{10}	243?	~0,003	~1200
α_{11}	209	0,004	360
α_{12}	6 примесь U^{233} (основной переход)		
α_{18}	424	0,007	30

Card 2/$ 2

ACC NR: AP6015692   SOURCE CODE: UR/0413/66/000/009/0089/0089

INVENTOR: Ivanov, P. D.

ORG: None

TITLE: A wide-angle hydrographic surveying lens. Class 42, No. 181332

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 89

TOPIC TAGS: optic lens, hydrographic survey, surveying equipment

ABSTRACT: This Author's Certificate introduces a wide-angle hydrographic surveying lens based on Author's Certificate No. 149905. The design provides for an increase in the relative aperature, elimination of the effect of oblique beams and improvement in image quality. There is an air gap in the orthoscopic component in which a diaphragm and a single convexo-concave lens are mounted. The plane of the exit pupil of this lens coincides with the principal plane of the objective lens.

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Card   1/2   UDC: 771.351.7

ACC NR: AP6015692

1—orthoscopic component; 2—diaphragm; 3—convexo-concave lens

SUB CODE: 08, 20/ SUBM DATE: 14Sep64

Card 2/2

ACC NR: AP6021461   (N)   SOURCE CODE: UR/0413/66/000/011/0083/0083

INVENTOR: Rusinov, M. M.; Ivanov, P. D.

ORG: None

TITLE: A fast wide-angle hydrologic surveying objective lens. Class 42, No. 182359

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 83

TOPIC TAGS: lens, hydrologic instrument, surveying instrument

ABSTRACT: This Author's Certificate introduces a fast wide-angle hydrologic survey-
ing objective lens which contains a plano-elliptical lens and an orthoscopic compo-
nent. To increase the relative aperture and improve image quality, the orthoscopic
component is made in the form of a symmetric objective lens with positive plano-
convex lenses mounted in the front and back. The lens mounted behind the symmetric
objective is made up of three separate lenses cemented together.

UDC: 771.351.7

Card 1/2

ACC NR: AP6021461

1—symmetric objective lens;
2 and 3—positive plano-convex
lenses

SUB CODE: 17, 08/   SUBM DATE: 11Sep64

Card   2/2

IVANOV, P.D.

Smooth flow of work in a liqueur and vodka plant. Spirt.prom. 21
no.1:34-36 '55.   (MIRA 8:5)

1. Vitebskiy likero-vodochnyy zavod.
        (Vitebsk--Liquor industry)

IVANOV, P.D.

Introducing isoplanate lenses for increasing the relative aperture
of a wide-angle objective. Izv.vys.ucheb.zav.;prib. 7 no.5:132-134
'64.   (MIRA 17:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovano
kafedroy optiko-mekhanicheskikh priborov.

IVANOV, P.D.; SHARANOV, A.G.

Foundryman's brief technological handbook. Lit.proizv. no.10:
32-3 of cover O '57.
                    (Founding)   (MIRA 10:12)

IVANOV, P.D., inzh.

Investigating the distribution of cooling water in the pipes of air-cooler systems. Sudostroenie 26 no.12:36-39 D '60.
(MIRA 13:11)

(Ships--Air conditioning)

S/229/62/000/002/001/001
I004/I204

AUTHORS: Matveyev, G.A..Candid. of Medical Science, and
            Ivanov, E.D..Engineer

TITLE: On the prospect of employing magnetohydrodynamic
          generators for ship propulsion

PERIODICAL: Sudostroyeniye, 28 no. 2, 1962, 32-36

TEXT: Magnetohydrodynamic interactions allow for the direct
conversion of heat into electrical energy. The article discusses
the basic features of magnetohydrodynamic (MHD) power generating
units with a view to their utilization for ship propulsion. It
reviews the present practice. Theoretical principles of a magneto-
hydrodynamic generator are displayed. It is pointed out that the
MHD method of power generation makes it possible to use fuel gas

Card 1/?

S/229/62/000/002/001/001
I004/I204

On the prospect of employing.....

at much higher temperatures than in gas turbines, and thus to
reduce dimensions with a simultaneous increase of efficiency. It
is estimated that a MHD generator of 426,000 kW may be 25% more
efficient than the most efficient conventional power plant. The
following problems are awaiting solution in order to make a MHD
generator practical: (a) obtaining heat-resistant materials for
the combustion chamber elements, (b) obtaining heat-resistant and
highly electro-inductive materials for the electrodes, (c) develop-
ment of the MHD itself with high efficiency, (d) development of
means for substantially increasing the electrical conductivity of
the gaseous media. There are 2 figures.

Card 2/2

IVANOV, P.D.

Establishing an air gap for setting a diaphragm in some designs
of photographic objectives. Izv.vys.ucheb,zav.; prib. 5 no.6:
85-95 '62.   (MIRA 15:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana
kafedroy optiko-mekhanicheskikh priborov.
                        (Photographic optics)

IVANOV, P.D.

Correction of the distortion in a negative system with an
external eyepiece. Izv. vys. ucheb. zav.; prib. 6 no.5:
112-125 '63.

(MIRA 16:11)

1. Leningradskiy institut tochnoy mekhaniki i optiki.
Rekomendovana kafedroy optiko-mekhanicheskikh priborov.

ACC NR: AP6005355   SOURCE CODE: UR/0413/66/000/001/0096/0096

AUTHOR: Ivanov, P. D.

ORG: none

TITLE: Wide-angle hydrosurveying objective. Class 42, No. 177653

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 96

TOPIC TAGS: optic lens, surveying instrument, optic instrument

ABSTRACT: This Author Certificate presents a wide-angle hydrosurveying objective, containing four components. The first two are uncemented negative lenses and the remaining two are positive (see Fig. 1). To increase the relative aperture and to

Fig. 1. 1 - third component; 2 - double convex lens; 3 - concavo-convex lens

improve the image quality while decreasing the overall dimensions, the third

Card 1/2   UDC: 535.351.7

L 42062-66

ACC NR: AP6005355

component is in the form of a double convex and a concavo-convex lens cemented together. Orig. art. has: 1 diagram.

SUB CODE: 08, 17/   SUBM DATE: 02Jun64

Card 2/2 af

PETROV, Aleksandr Konstantinovich; SURIN, Sergey Filippovich;
SHELKOV, N.I., inzh., ved. red.; IVANOV, P.F., inzh., red.;
SOROKINA, T.M., tekhn. red.

[Highly efficient method for jig boring deep blind holes in
cylinders with subsequent reaming] Vysokoproizvoditel'nyi
metod kombinirovannogo rastachivaniia glukhikh glubokikh ot-
verstii tsilindrov s posleduiushchim razvertyvaniem. Mo-
skva, Filial Vses.in-ta nauchn. i tekhn.informatsii, 1958. 16 p.
(Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 10,
No.M-58-153/28)   (Drilling and boring)   (MIRA 16:2)

IVANOV, P.F., inzh.

Preliminary lubrication of the slide bearing of a diesel engine before its start. Trakt.i sel'khomash. 32 no.9:18-20 S '62.

(MIRA 15:12)

1. Chelyabinskiy traktornyy zavod.
                    (Diesel engines)

SOV/65-58-5-10/14

AUTHORS: Kanterman, L.B.; Dukhan, B.S.; Ivanov, P.G.

TITLE: Automatic Distillation Apparatus. (Apparat dlya avtomaticheskoy razgonki)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 5, pp 57-60 (USSR)

ABSTRACT: Fractional composition at the beginning and end of the distillation is one of the most important indicators of the properties of many petroleum products. The automatic universal apparatus AFR, designed by members of TsZL in Irkutsk, and further modified by KB ANZ, and the semi-automatic simplified apparatus, constructed by members of the Ufa Oil Refinery, have been described in earlier publications. The automatic simplified apparatus described below is used for the distillation of petroleum products, and was designed and constructed by members of the KIP and TsZL of the Kuybyshev Petroleum Refinery. It is intended for use in industrial plants for the analysis of petroleum distillates. The analysis is carried out automatically every thirty minutes, and registered on an electronic potentiometer. Results of the analysis obtained at increased rates of distillation were found to be

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Automatic Distillation Apparatus   SOV/65-58-5-10/14

comparable to results of analyses according to GOST 2177-48 (accuracy ± 2%).
Figs. 1 and 2 give the cross-section and photograph of the apparatus re-
spectively. The apparatus comprises a measuring device and pneumatic supply,
the distillation apparatus itself, a pneumatic electric time relais, a
photo-electric relais, an electronic potentiometer, and a fireproof safety
guard. The apparatus is mounted in a metallic case (1300 x 900 x 600 mm).
Details of the working of the apparatus are given which was constructed out
of standardized parts when using a photo-electric system. The apparatus was
tested for several months in the laboratories and in the plant AVT where
some improvements in the design were carried out. However, the principle
design, as well as the basic construction of the apparatus, were satisfactory.
Further modifications, when using a photo-electric system, are investigated
in the Department for Automation and Telemechanics of the Kuybyshev Indus-
trial Institute (Kafedra avtomatiki i telemekhaniki Kuybyshevskogo indus-
trial'nogo instituta). There are 3 Figures.

ASSOCIATION: Kuybyshev Petroleum Refinery (Kuybyshevskiy neftepererabatyvayushchiy
             zavod).

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SOV/81-59-5-15311

5.3300

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 5, p 186 - 187
(USSR)

AUTHORS: Kuznetsov, P.M., Ivanov, P.G.

TITLE: The Synthesis of Some Diphenyl- and Dicyclohexyl Alkanes of Symmetrical Structure

PERIODICAL: Sb. tr. Stavropol'sk. gos. ped. in-ta, 1958, Nr 11, pp 153-157

ABSTRACT: The methods are described for obtaining $C_6H_5(CH_2)_3C_6H_5$ (I), $C_6H_5(CH_2)_5C_6H_5$ (II), $C_6H_5CH_2CH=CHCH_2CH_2C_6H_5$ (III), $(C_6H_{11})_2CH_2$ (IV), $(C_6H_{11}CH_2)_2$ (V) and $C_6H_{11}(CH_2)_5C_6H_{11}$ (VI). 80 g of $(C_6H_5CH_2)_2CHOH$ (b.p. 188 - 190°C/5 mm) in 70 g of dioxane and 10 g of Cr_2O_3CuO (VII) are hydrogenated at 260 - 270°C for 1 hour (initial pressure 120 atm.), the filtrate is evaporated, the residue is extracted with ether and I is separated, yield 98%, b.p. 168 - 170°C/5 mm and 298 - 300°C/752 mm, $n^{20}D$ 1,5755, d_4^{20} 1.0052. In the same way, from 350 g of $(C_6H_5CH=CH)_2CO$ in 500 ml of dioxane and 35 g of VII (initial pressure 120 - 130 atm, 2 hours), 70 g of II is obtained (b.p. 182 - 184°C/9 mm and 322 - 325°C/748 mm, $n^{20}D$ 1.5572, d_4^{20} 0.5185) and 275 g of

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The Synthesis of Some Diphenyl- and Dicyclohexyl Alkanes of Symmetrical Structure

$(C_6H_5CH_2CH_2)_2CHOH$ (VIII), b.p. 215 - 218°C/9 mm, melting point 47 - 48°C. By dehydration in a vacuum over $KHSO_4$, VIII is converted to III, the yield is 92%, b.p. 172 - 174°C/7 mm. 210 g of $(C_6H_5)_2CH_2$ are hydrogenated in 100 g of dioxane and 20 g of skeleton Ni (130 atm, 250 - 260°C), a 96% IV is separated, b.p. 110 - 111°C/18 mm and 251 - 252°C/745 mm, $n^{25}D$ 1.4749, d_4^{25} 0.8768. V is obtained in a similar way [from $C_6H_5(CH_2)_2$], yield 98%, b.p. 110 - 112°C/9 mm, and 271 - 272°C/744 mm, $n25D$ 1.4748, d_4^{25} 9.8757, and VI (from II), yield 98%, b.p. 178 - 181°C/10 mm, 142 - 144°C/5 mm and 314°C/745 mm, $n^{22}D$ 1.4772, d_4^{22} 0.8728.

V. Skorodumov

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2o-119-4-27/6o

AUTHORS: Ivanov, P. G., Balandin, A. A., Member, Academy of Sciences, USSR

TITLE: On the Thermal Ionization of Hydrogen and Hydrocarbons in the
              Presence of Metal Catalysts (O termicheskoy ionizatsii vodoroda
              i uglevodorodov v prisutstvii metallicheskikh katalizatorov)
                                   SSSR,
PERIODICAL: Doklady Akademii Nauk 1958, Vol. 119, Nr 4,
              pp. 727 - 73o (USSR)

ABSTRACT: The aim of the present work is the direct detection of the
              occurrence of charged particles in the gaseous phase in the
              presence of metal surfaces with catalytic properties. The con-
              struction of the measuring apparatus is discussed on the basis
              of a schematical drawing. The device was evacuated to 10^{-4} mm
              mercury column before the experiments began. The results obtained
              by ionization tests were represented in form of time-tempera-
              ture diagrams (the abscissa stands for the time τ and the
              ordinate for temperature). The more intense ionization becomes,
              the more will the course of the curve extend towards the eye and
              downwards. A further diagram illustrates the results for hydrogen
Card 1/4   in the presence of electrodes made from palladium, aluminum and

On the Thermal Ionization of Hydrogen and Hydrocarbons   2o-119-4-27/6o
in the Presence of Metal Catalysts

copper. Accordingly, the number of ions begins to increase
noticeably below 1oo°. It must be borne in mind that with
 an increase of temperature the ionization of hydrogen de-
pends on the material of the electrodes; it is in all cases
reproducible and reversible. Ionizability can, e.g. be charac-
terized according to that temperature at which the inverse
discharge velocity amounts to 6o seconds. The lower this amount
t_{60}, the greater ionizability will be. In palladium electrodes
this temperature is very low for hydrogen, amounting to only
$t_{60} = 3o°$. For palladium and aluminum electrodes it holds that
$t_{60} = 1oo°$ and in the presence of copper electrodes it holds that
$t_{60} = 135°$. In a similar manner also the ionization of the vapors
of hydrocarbons of different structure was studied: H-heptane,
2,2,4-trimethyl-pentane, cyclohexane; benzene; decaline, tetra-
line and also cyclic ketone; these experiments were carried out
with different electrodes. In all these cases ionization occurred.
Experiments carried out with hydrocarbons were reproducible
Card 2/4   with the exception of cases with hysteresis. Also in this case

On the Thermal Ionization of Hydrogen and Hydrocarbons   2o-119-4-27/6o
in the Presence of Metal Catalysts

the ionization observed depends in a high degree on the elec-
trode material and therefore occurs on the surface of the metal.
Besides, such an ionization depends on the nature of the gas, and
therefore it occurs on the layer of molecules adsorbed on the
gas. On the electrodes the electrons rapidly enter into the me-
tal, and therefore there is no equilibrium in ionization under
the conditions described. In tetraline and decaline there may
be a hysteresis because of the presence of a steric factor. The
sequence found here is parallel to that of the catalytic activi-
ty of the metals in hydrogenization and dehydrogenization. The
phenomenon found here develops within the same intervals of tem-
perature as also the catalytic reactions mentioned. The new
effect proved to exist here is important for catalysis. It is
not taken into account by hitherto developed electron theories
of catalysis, but this must, without doubt, be done in the case
of a further development of the theory. The investigation is
continued. There are 4 figures, 1 table and 2 references, none of
which are Soviet.

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On the Thermal Ionization of Hydrogen and Hydrocarbons   2o-119-4-27/6o
in the Presence of Metal Catalysts

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
            (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: December 26, 1957

Card 4/4

IVANOV, P.G.; SUMIOVA, N.V.; GURKINA,A.I.

Thermal stability of the sulfur-organic compounds of certain oils.
Nefteper. i neftekhim. no.3:12-15 '63.
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LYAPUNOV, Boris Valer'yanovich; IVANOV, P.I., redaktor; FRIDKIN, A.M.,
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Ivanov, P. I.

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R. Z. Kudaikina and P. I. Ivanov, Sad i Ogorod, 1951, no.
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Spraying trees with α-naphthyl acetic acid, 2,4-D, and their
salts. Tables.

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PSIKHOLOGIYA (PSYCHOLOGY) 2. IZD. MOSKVA, UCHPEDGIZ, 1956

382 P. ILLUS.

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IVANOV, Platon Ivanovich; RUMYANTSEVA, I.P., red.; LEPILIN, I.V.,
red.; SHCHEPTEVA, T.A., tekhn.red.

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IVANOV, Petr Ivanovich

ZHERDEV, Aleksey Prokof'yevich; IVANOV, Petr Ivanovich; NABOKOV, Konstantin
Fedorovich; TARASOV, Ivan Nikolayevich; ANDRES, U.T.S, otvetstvennyy
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[Work practices of the Novo-Uzlovsk coal preparation plant] Opyt
raboty Novo-Uzlovskoi tsentral'noi obogatitel'noi fabriki. Moskva,
Ugletekhizdat, 1956. 78 p.   (MLRA 10:7)
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IVANOV, P.I.

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        Ser.khim.no.9:128-129 '56.   (MLRA 9:7)
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IVANOU, P.I.

24(0); 5(4); 6(2)   PHASE I BOOK EXPLOITATION   SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni
D.I. Mendeleyeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific
Research Abstracts; Collection of Articles, Nr 2) Moscow,
Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Komitet standartov, mer i
izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers,
and engineers engaged in developing standards, measures, and
gages for the various industries.

COVERAGE: The volume contains 123 reports on standards of measure-
ment and control. The reports were prepared by scientists of
institutes of the Komitet standartov, mer i izmeritel'nykh
priborov pri Sovete Ministrov SSSR (Commission on Standards,
Measures, and Measuring Instruments under the USSR Council of
Ministers). The participating institutes are: VNIIM -
Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I.
Mendeleyeva (All-Union Scientific Research Institute of Met-
rology imeni D.I. Mendeleyev) in Leningrad; Sverdlovsk branch
of this institute; VNIIK - Vsesoyuznyy nauchno-issledovatel'skiy
institut Komiteta standartov, mer i izmeritel'nykh priborov
(All-Union Scientific Research Institute of the Commission
on Standards, Measures, and Measuring Instruments), created
from MGIMIP - Moskovskiy gosudarstvennyy institut mer i
izmeritel'nykh priborov (Moscow State Institute of Measures
and Measuring Instruments) October 1, 1955; VNIIFTRI -
Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhni-
cheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific
Research Institute of Physicotechnical and Radio-engineering
Measurements) in Moscow; KhGIMIP - Khar'kovskiy gosudarstvennyy
institut mer i izmeritel'nykh priborov (Khar'kov State Institute
of Measures and Measuring Instruments); and NGIMIP - Novosi-
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Standard Optical Pyrometers for Measuring Temperatures up to
6000 C   76

Krasovitskaya, R.M. (KhGIMIP). Investigation of Radiation Pyro-
meters in Order to Increase the Accuracy of Their Calibration   77

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Reproduction of Temperature Scale by the Optical Method in the
1063-3000°C Temperature Range   77

Lapina, E.A. (VNIIM). Designing and Studying Standard Tungsten
Pyrometer Lamps   78

Lapina, E.A., A.N. Gordov, and I.I. Kirenkov (VNIIM). Designing
a Standard Color Pyrometer   79

Gordov, A.N., I.I. Kirenkov, and E.A. Lapina (VNIIM). Developing
a New Method of Checking Optical Pyrometers   79

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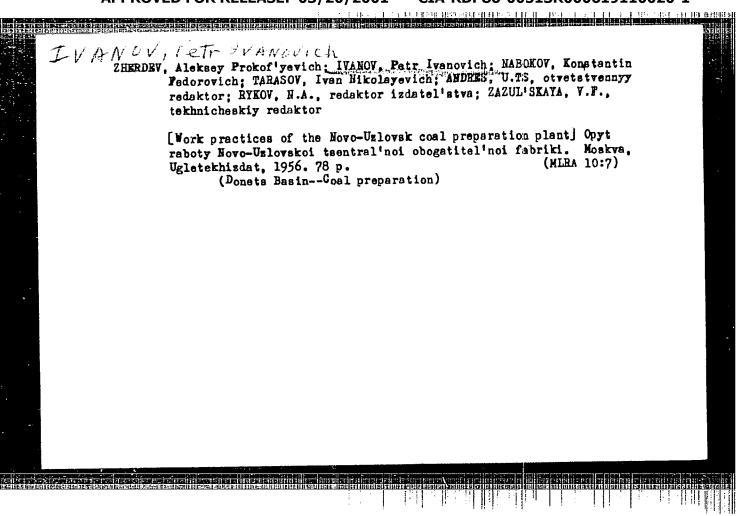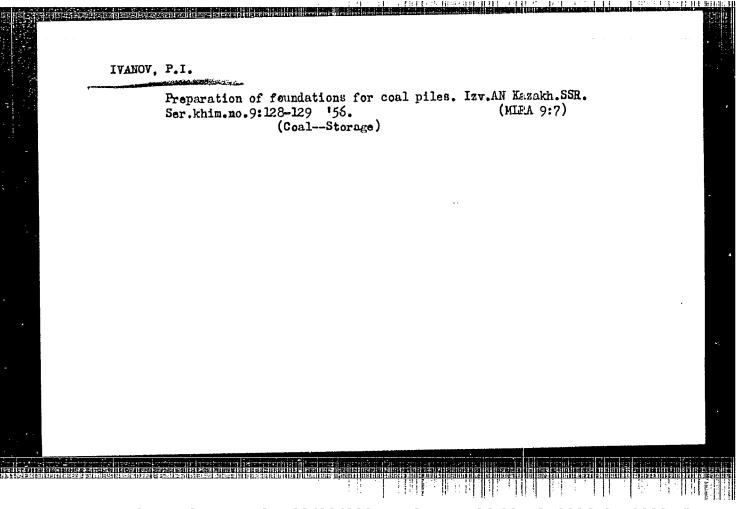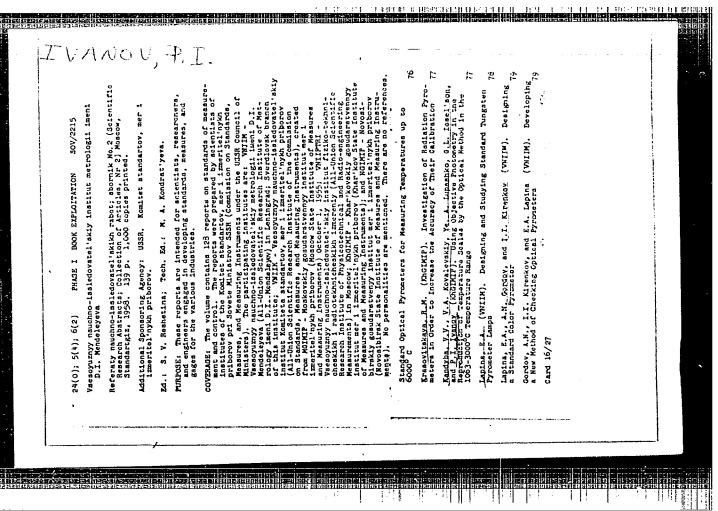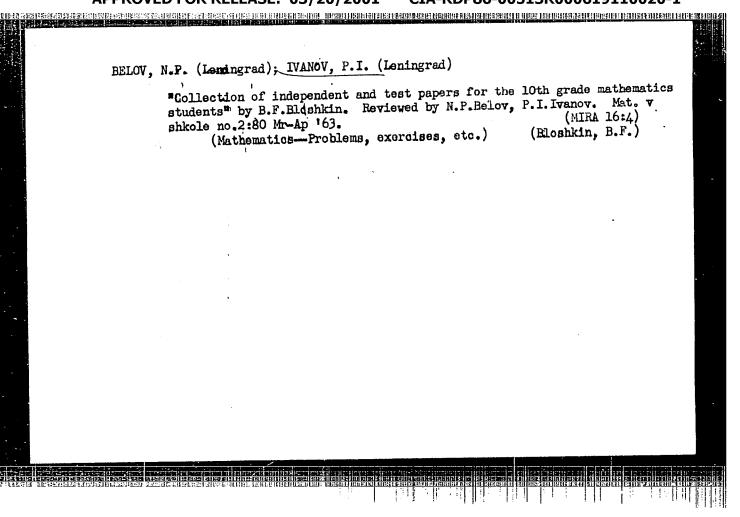   (Mathematics—Problems, exercises, etc.)   (Bloshkin, B.F.)

ACCESSION NR: AT4038165   S/2690/63/005/006/0087/0100

AUTHOR: Ivanov, P. I.

TITLE: Dynamic features of one type of self-adjusting system

SOURCE: AN LatSSR. Institut elektroniki i vy*chislitel'noy tekh-
niki. Trudy*, v. 5, 1963. Avtomatika i vy*chislitel'naya tekhnika
(Automation and computer engineering), no. 6, 87-100

TOPIC TAGS: automatic control theory, control system stability,
algorithm, optimal control, feedback

ABSTRACT: A system is considered in which reliable operation of an
automatic control system is ensured by introducing an additional
self-adjusting loop which continuously observes the characteristics
of the system, transforms the observation data into some quality in-
dex, and automatically varies the selected parameter as a function
of the quality index. The self-adjusting loop consists of an actuat-

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ACCESSION NR: AT4038165

ing unit and of an analyzer. The latter constitutes one possible
realization of the self-adjustment algorithm, containing all the
necessary information on the location of the operating point on the
stability region and subsequent deviation of the operating point.
The self-adjusting algorithm establishes a unique connection between
the output of the analyzer and the dynamic state of the principal
automatic control system. Equations are derived for the self-adjust-
ing loop, for the self-adjustment process, and for the stability of
the self-adjustment limit cycle. The presence of a stable limit
cycle for the self-adjustment is demonstrated and it is indicated
that the parameter most amenable to adjustment is the time constant
of the actuating unit. Orig. art. has: 11 figures and 34 formulas.

ASSOCIATION: None

SUBMITTED: 00   DATE ACQ: 04Jun64   ENCL: 00

SUB CODE: MA, DP   NR REF SOV: 002   OTHER: 000

Card 2/2

IVANOV, Petr Ivanovich; ALEKSANDROV,L.A., redaktor;TIKHONOVA,Ye.A.,
tekhnicheskiy redaktor

[Problems in technical mechanics for ship handlers] Zadachnik po
tekhnicheskoi mekhanike dlia sudovoditelei. Moskva, Izd-vo
"Morkoi transport," 1955. 134 p.   (MLRA 9:2)
                    (Marine engineering)